

TALKING POINTS

BOSMA LAGOON 1, 2 AND 3 SOIL TESTING

1. Introductions and Overview
2. Status of testing
 - a. QAPP Addendum: ALS used for TKN analyses and archive re-analyses
 - b. Lagoon 3 borings re-drilled; other planned borings; analyzed at ALS for TKN (see attached Progress Figure)
 - c. Preliminary data received from most locations
 - d. ALS/SoilTest comparisons favorable (comparable results - TKN v. TKN)
 - e. MDLs, RLs and field blank results favorable; validation ongoing
3. Testing Observations
 - a. Soil types: Mostly sand and gravel; some silt layers/lenses encountered at each lagoon
 - b. Soil borings completed until saturated soils encountered
 - c. Data tabulated in Table 1 and plotted in Figures 1, 2 and 3
 - d. Data evaluated by treatment zone
 - i. Shallow treatment zone: 0-4 ft
 - ii. Intermediate treatment zone: 5-10 ft
 - iii. Deep treatment zone: 10-15 ft
 - iv. Transition: 15 ft to water table
 - v. Berm grade-out assumed prior to treatment
 - e. Total nitrogen v. inorganic nitrogen
 - i. Total nitrogen averages ~2x inorganic nitrogen (range 1.0x to 2.5x)
 - f. Concentration trends
 - i. Nitrogen decreases with depth
 - ii. Nitrogen depths Lagoon 3 < Lagoon 2 < Lagoon 1
 - iii. Average concentrations by treatment zone in Table 2 and Figures 1-3

Table 2. Summary of Average Soil Nitrogen Levels by Lagoon and Treatment Zone

Soil Zone	Lagoon 3		Lagoon 2		Lagoon 1	
Shallow	IN = 82	TN = 164 *	IN = 188	TN = 499	IN = 278	TN = 492
Intermediate	IN = 18	TN = 31	IN = 68	TN = 131	IN = 124	TN = 208
Deep	IN = 8	TN = 12	IN = 49	TN = 75	IN = 15	TN = 63
Transition	IN = 10	TN = 10	IN = 20	TN = 30	IN = 6	TN = 27

Notes:

Data are preliminary and unvalidated; results are subject to revision

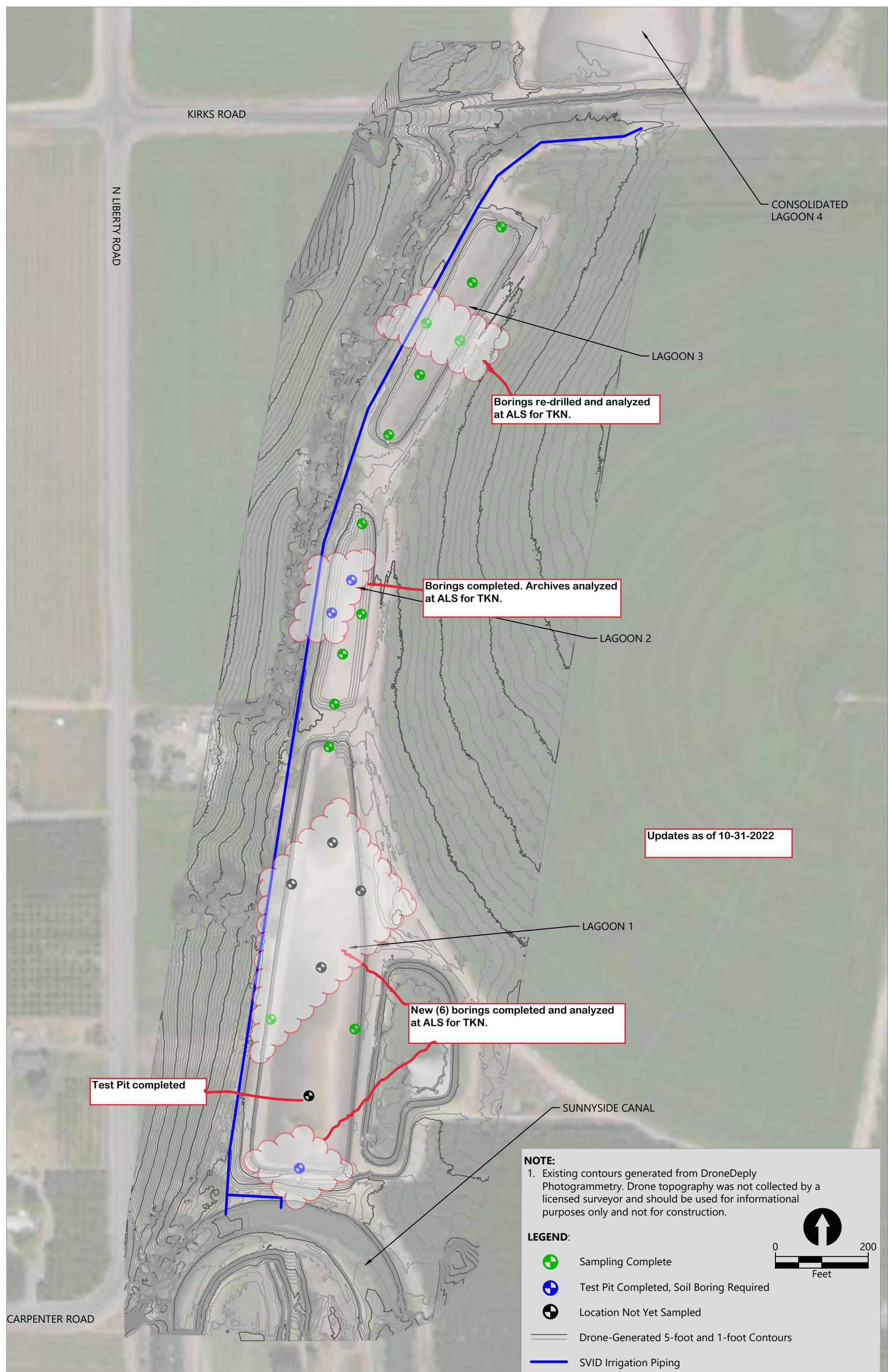
Results expressed as arithmetic averages in mg N/kg

IN: Inorganic nitrogen (ammonia-N plus nitrate-N)

TN: Total nitrogen (ammonia-N plus nitrate-N plus organic-N)

*: Lagoon 3 test pits pre-date organic N testing requirement. Organic N estimated as 2x inorganic N concentration.

4. Review of proposed treatment strategy
 - a. Crop mix and growing strategy
 - b. Expected nutrient extraction rates
 - i. Gross = 550 pounds N/acre/year (range 525-585)
 - ii. Net (excluding allowance for nitrogen fixation by alfalfa) = 470 pounds N/acre/year (range 450-500)
 - iii. Preferential (more rapid) uptake of inorganic fraction
 - iv. Organic N uptake varies with mineralization rate; some organic N will be unavailable
 - c. Treatment times will vary by lagoon (Lagoon 3 < Lagoon 2 < Lagoon 1)
 - d. Ongoing run-on controls and moisture sensors throughout treatment
 - e. Progress of treatment documented through periodic soil testing (2 year intervals)
5. Benefits of cropping proposal
 - a. Permanent removal of lagoons from higher-risk geologic area
 - b. Permanent treatment of residual nitrogen in subsurface
 - c. Sustainable treatment approach
 - i. Lower fuel/resource consumption (compared to lining or ex situ treatment)
 - ii. Soil conservation (does not degrade surface soils due to rocky subsurface soils as would ex situ treatment)
 - d. Ability to treat all lagoon areas
 - e. Incidental treatment of soils below the treatment target
 - f. Cost-effectiveness in comparison to lining or ex situ treatment
6. Discussion



Publish Date: 2022/08/01 11:20 AM | User: jsexton
 Filepath: K:\Lagoons - 2022\Reports\Bosma_1-2-3_Abandonment\0996-RP03-2021-SamplingPlan-1_2_3_Abandonment.dwg Sampling Progress Figure

Table 1. Interim Summary of Soil Sampling Data - H&S Bosma Dairy Lagoons 1, 2 and 3

Revised Oct 28, 2022

Sample ID	Sample Type	Collection Date	Depth Below Exposed Soil Surface (feet)	Soil Conditions	Ammonia-N (mg N/kg)		Nitrate-N (mg N/kg)		TKN-N (mg N/kg)		Sum of Ammonia and Nitrate (mg N/kg)		Sum of Ammonia, Nitrate and Organic Nitrogen (mg N/kg)					
					SoilTest	ALS	SoilTest	ALS	SoilTest	ALS	SoilTest	ALS	SoilTest	ALS				
LAGOON 3 DATA																		
Lagoon No. 3 - North Sidewall																		
BOS-LO3-SO1-1-2021 1025	Test Pit	10/25/2021	0 to 1	Dry	1.7	--	147.7	--	--	--	149.4	--	--	--				
BOS-LO3-SO1-2-2021 1025	Test Pit	10/25/2021	1 to 2	Dry	ND (u)	--	89.5	--	--	--	89.5	--	--	--				
BOS-LO3-SO1-3-2021 1025	Test Pit	10/25/2021	2 to 3	Dry	2.6	--	47.7	--	--	--	50.3	--	--	--				
BOS-LO3-SO1-4-2021 1025	Test Pit	10/25/2021	3 to 4	Dry	3.1	--	93.8	--	--	--	96.9	--	--	--				
BOS-LO3-SO1-5-2021 1025	Test Pit	10/25/2021	4 to 5	Dry	3.6	--	18.3	--	--	--	21.9	--	--	--				
BOS-LO3-SO1-6-2021 1025	Test Pit	10/25/2021	5 to 6	Dry	2.9	--	17.3	--	--	--	20.2	--	--	--				
BOS-LO3-SO1-7-2021 1025	Test Pit	10/25/2021	6 to 7	Dry	3.1	--	14.2	--	--	--	17.3	--	--	--				
BOS-LO3-SO1-8-2021 1025	Test Pit	10/25/2021	7 to 8	Dry	2.6	--	28.8	--	--	--	31.4	--	--	--				
BOS-LO3-SO1-9-2021 1025	Test Pit	10/25/2021	8 to 9	Dry	3.5	--	20.3	--	--	--	23.8	--	--	--				
BOS-LO3-SO1-10-2021 1025	Test Pit	10/25/2021	9 to 10	Dry	3.6	--	30.4	--	--	--	34	--	--	--				
Lagoon No. 3 - South Sidewall																		
BOS-LO3-SO4-1-2021 1025	Test Pit	10/25/2021	0 to 1	Dry	67.9	--	5.9	--	--	--	73.8	--	--	--				
BOS-LO3-SO4-2-2021 1025	Test Pit	10/25/2021	1 to 2	Dry	81.7	--	ND (u)	--	--	--	81.7	--	--	--				
BOS-LO3-SO4-3-2021 1025	Test Pit	10/25/2021	2 to 3	Dry	61.6	--	ND (u)	--	--	--	61.6	--	--	--				
BOS-LO3-SO4-4-2021 1025	Test Pit	10/25/2021	3 to 4	Dry	10.7	--	2.9	--	--	--	13.6	--	--	--				
BOS-LO3-SO4-5-2021 1025	Test Pit	10/25/2021	4 to 5	Dry	21.6	--	21	--	--	--	42.6	--	--	--				
BOS-LO3-SO4-6-2021 1025	Test Pit	10/25/2021	5 to 6	Dry	6	--	1.8	--	--	--	7.8	--	--	--				
BOS-LO3-SO4-7-2021 1025	Test Pit	10/25/2021	6 to 7	Dry	5	--	6.6	--	--	--	11.6	--	--	--				
BOS-LO3-SO4-8-2021 1025	Test Pit	10/25/2021	7 to 8	Dry	6.1	--	6.8	--	--	--	12.9	--	--	--				
BOS-LO3-SO4-9-2021 1025	Test Pit	10/25/2021	8 to 9	Dry	4.5	--	3.4	--	--	--	7.9	--	--	--				
BOS-LO3-SO4-10-2021 1025	Test Pit	10/25/2021	9 to 10	Dry	2.4	--	6.9	--	--	--	9.3	--	--	--				
Lagoon No. 3 - Northern Bottom Sample																		
20211115-BOS-3-BN-0	Test Pit	11/15/2021	0 to 1	Dry	251.3	--	23.7	--	--	--	275	--	--	--				
20211115-BOS-3-BN-1	Test Pit	11/15/2021	1 to 2	Dry	139.7	--	1.9	--	--	--	141.6	--	--	--				
20211115-BOS-3-BN-2	Test Pit	11/15/2021	2 to 3	Dry	128.6	--	15.4	--	--	--	144	--	--	--				
20211115-BOS-3-BN-3	Test Pit	11/15/2021	3 to 4	Dry	208	--	0.8	--	--	--	208.8	--	--	--				
20211115-BOS-3-BN-4	Test Pit	11/15/2021	4 to 5	Dry	20.5	--	ND (u)	--	--	--	20.5	--	--	--				
20211115-BOS-3-BN-5	Test Pit	11/15/2021	5 to 6	Dry	18.5	--	4.8	--	--	--	23.3	--	--	--				
20211115-BOS-3-BN-6	Test Pit	11/15/2021	6 to 7	Dry	32.6	--	1.1	--	--	--	33.7	--	--	--				
20211115-BOS-3-BN-7	Test Pit	11/15/2021	7 to 8	Dry	14.3	--	ND (u)	--	--	--	14.3	--	--	--				
20211115-BOS-3-BN-8	Test Pit	11/15/2021	8 to 9	Dry	10.1	--	1.4	--	--	--	11.5	--	--	--				
20211115-BOS-3-BN-9	Test Pit	11/15/2021	9 to 10	Dry	8.2	--	0.7	--	--	--	8.9	--	--	--				
Lagoon No. 3 - Southern Bottom Sample																		
20211115-BOS-3-BS-0	Test Pit	11/15/2021	0 to 1	Dry	109.5	--	176.8	--	--	--	286.3	--	--	--				
20211115-BOS-3-BS-1	Test Pit	11/15/2021	1 to 2	Dry	92.8	--	6	--	--	--	98.8	--	--	--				
20211115-BOS-3-BS-2	Test Pit	11/15/2021	2 to 3	Dry	6.6	--	24.4	--	--	--	31	--	--	--				
20211115-BOS-3-BS-3	Test Pit	11/15/2021	3 to 4	Dry	65.2	--	11.2	--	--	--	76.4	--	--	--				
20211115-BOS-3-BS-4	Test Pit	11/15/2021	4 to 5	Dry	118.7	--	11.8	--	--	--	130.5	--	--	--				
20211115-BOS-3-BS-5	Test Pit	11/15/2021	5 to 6	Dry	10.3	--	45.6	--	--	--	55.9	--	--	--				
20211115-BOS-3-BS-6	Test Pit	11/15/2021	6 to 7	Dry	5.7	--	19.8	--	--	--	25.5	--	--	--				
20211115-BOS-3-BS-7	Test Pit	11/15/2021	7 to 8	Dry	5.6	--	9.8	--	--	--	15.4	--	--	--				
20211115-BOS-3-BS-8	Test Pit	11/15/2021	8 to 9	Dry	7.8	--	21	--	--	--	28.8	--	--	--				
20211115-BOS-3-BS-9	Test Pit	11/15/2021	9 to 10	Dry	10.1	--	15.4	--	--	--	25.5	--	--	--				
Lagoon No. 3 - West Sidewall																		
BOS-LO3-SO2-1-2021 1025	Test Pit	10/25/2021	0 to 1	Dry	97.5	--	26.8	--	--	--	124.3	--	--	--				
BOS-LO3-SO2-2-2021 1025	Test Pit	10/25/2021	1 to 2	Dry	30.8	--	1	--	--	--	31.8	--	--	--				
BOS-LO3-SO2-3-2021 1025	Test Pit	10/25/2021	2 to 3	Dry	23.1	--	1	--	--	--	24.1	--	--	--				
BOS-LO3-SO2-4-2021 1025	Test Pit	10/25/2021	3 to 4	Dry	25	--	1.8	--	--	--	26.8	--	--	--				
BOS-LO3-SO2-5-2021 1025	Test Pit	10/25/2021	4 to 5	Dry	25.2	--	28.5	--	--	--	53.7	--	--	--				
BOS-LO3-SO2-6-2021 1025	Test Pit	10/25/2021	5 to 6	Dry	1.9	--	39.9	--	--	--	41.8	--	--	--				
BOS-LO3-SO2-7-2021 1025	Test Pit	10/25/2021	6 to 7	Dry	3.3	--	51.6	--	--	--	54.9	--	--	--				
BOS-LO3-SO2-8-2021 1025	Test Pit	10/25/2021	7 to 8	Dry	8.5	--	67	--	--									

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					SoilTest	ALS	SoilTest	ALS	SoilTest	ALS	SoilTest	ALS	SoilTest	ALS
LD-L3-SB-W-30-31 Re	Boring	9/21/2022	30 to 31	Moist	--	0.09 J	--	9.46	--	10 J	--	9.55	--	19.5
LD-L3-SB-W-31-32 Re	Boring	9/21/2022	31 to 32	Saturated	--	21.1	--	< 0.50	--	37 J	--	21.35	--	37.0
Lagoon No. 3 - East Sidewall														
BOS-LO3-SO3-1-2021 1025	Test Pit	10/25/2021	0 to 1	Dry	ND (u)	--	83.3	--	--	--	83.3	--	--	--
BOS-LO3-SO3-2-2021 1025	Test Pit	10/25/2021	1 to 2	Dry	ND (u)	--	188.2	--	--	--	188.2	--	--	--
BOS-LO3-SO3-3-2021 1025	Test Pit	10/25/2021	2 to 3	Dry	ND (u)	--	103.1	--	--	--	103.1	--	--	--
BOS-LO3-SO3-4-2021 1025	Test Pit	10/25/2021	3 to 4	Dry	ND (u)	--	85.5	--	--	--	85.5	--	--	--
BOS-LO3-SO3-5-2021 1025	Test Pit	10/25/2021	4 to 5	Dry	4.2	--	131.3	--	--	--	135.5	--	--	--
BOS-LO3-SO3-6-2021 1025	Test Pit	10/25/2021	5 to 6	Dry	ND (u)	--	56.6	--	--	--	56.6	--	--	--
BOS-LO3-SO3-7-2021 1025	Test Pit	10/25/2021	6 to 7	Dry	2.3	--	44.6	--	--	--	46.9	--	--	--
BOS-LO3-SO3-8-2021 1025	Test Pit	10/25/2021	7 to 8	Dry	ND (u)	--	69.5	--	--	--	69.5	--	--	--
BOS-LO3-SO3-9-2021 1025	Test Pit	10/25/2021	8 to 9	Dry	1.8	--	76.7	--	--	--	78.5	--	--	--
BOS-LO3-SO3-10-2021 1025	Test Pit	10/25/2021	9 to 10	Dry	2.7	--	113.1	--	--	--	115.8	--	--	--
LD-L3-SB-E-10-11	Boring	5/27/2022	10 to 11	Dry	8.3	--	8.2	--	--	--	16.5	--	--	--
LD-L3-SB-E-11-12	Boring	5/27/2022	11 to 12	Dry	3.2	--	9.6	--	--	--	12.8	--	--	--
LD-L3-SB-E-12-13	Boring	5/27/2022	12 to 13	Dry	2.7	--	11	--	--	--	13.7	--	--	--
LD-L3-SB-E-13-14	Boring	5/27/2022	13 to 14	Dry	4.6	--	2.4	--	--	--	7	--	--	--
LD-L3-SB-E-14-15	Boring	5/27/2022	14 to 15	Dry	3.7	--	5.6	--	--	--	9.3	--	--	--
LD-L3-SB-E-15-16	Boring	5/27/2022	15 to 16	Dry	2.9	--	10.4	--	--	--	13.3	--	--	--
LD-L3-SB-E-16-17	Boring	5/27/2022	16 to 17	Dry	2.7	--	3.8	--	--	--	6.5	--	--	--
LD-L3-SB-E-17-18	Boring	5/27/2022	17 to 18	Dry	3.9	--	6.4	--	--	--	10.3	--	--	--
LD-L3-SB-E-18-19	Boring	5/27/2022	18 to 19	Dry	3.6	--	1.6	--	--	--	5.2	--	--	--
LD-L3-SB-E-19-20	Boring	5/27/2022	19 to 20	Dry	4.8	--	1.6	--	--	--	6.4	--	--	--
LD-L3-SB-E-20-21	Boring	5/27/2022	20 to 21	Dry	8	--	8.6	--	--	--	16.6	--	--	--
LD-L3-SB-E-21-22	Boring	5/27/2022	21 to 22	Dry	4.7	--	9.3	--	--	--	14	--	--	--
LD-L3-SB-E-22-23	Boring	5/27/2022	22 to 23	Dry	6.1	--	11.2	--	--	--	17.3	--	--	--
LD-L3-SB-E-23-24	Boring	5/27/2022	23 to 24	Dry	5.6	--	7.4	--	--	--	13	--	--	--
LD-L3-SB-E-24-25	Boring	5/27/2022	24 to 25	Dry	8.8	--	8	--	--	--	16.8	--	--	--
LD-L3-SB-E-25-26	Boring	5/27/2022	25 to 26	Dry	7.9	--	6.4	--	--	--	14.3	--	--	--
LD-L3-SB-E-26-27	Boring	5/27/2022	26 to 27	Dry	6.8	--	6	--	--	--	12.8	--	--	--
LD-L3-SB-E-27-28	Boring	5/27/2022	27 to 28	Moist	5.2	--	5.8	--	--	--	11	--	--	--
LD-L3-SB-E-28-29	Boring	5/27/2022	28 to 29	Moist	7	--	21.9	--	--	--	28.9	--	--	--
LD-L3-SB-E-29-30	Boring	5/27/2022	29 to 30	Moist	4.5	--	14.7	--	--	--	19.2	--	--	--
LD-L3-SB-E-30-31	Boring	5/27/2022	30 to 31	Saturated	5	--	11.2	--	--	--	16.2	--	--	--
LD-L3-SB-E-31-32	Boring	5/27/2022	31 to 32	Saturated	5.5	--	9.9	--	--	--	15.4	--	--	--
LD-L3-SB-E-32-33	Boring	5/27/2022	32 to 33	Saturated	3.2	--	14.1	--	--	--	17.3	--	--	--
LD-L3-SB-E-33-34	Boring	5/27/2022	33 to 34	Saturated	2.5	--	11.3	--	--	--	13.8	--	--	--
LD-L3-SB-E-34-35	Boring	5/27/2022	34 to 35	Saturated	3.7	--	15.5	--	--	--	19.2	--	--	--
LD-L3-SB-E-10-11 Re	Boring	9/21/2022	10 to 11	Dry	--	8.89	--	3.95	--	< 7	--	12.84	--	12.8
LD-L3-SB-E-11-12 Re	Boring	9/21/2022	11 to 12	Dry	--	3.9	--	5.03	--	< 7	--	8.93	--	8.9
LD-L3-SB-E-12-13 Re	Boring	9/21/2022	12 to 13	Dry	--	0.12 J	--	3.3	--	< 7	--	3.42	--	6.8
LD-L3-SB-E-13-14 Re	Boring	9/21/2022	13 to 14	Dry	--	2.65	--	4.14	--	< 6	--	6.79	--	7.1
LD-L3-SB-E-14-15 Re	Boring	9/21/2022	14 to 15	Dry	--	6.03	--	6.63	--	< 6	--	12.66	--	12.7
LD-L3-SB-E-15-16 Re	Boring	9/21/2022	15 to 16	Dry	--	0.1 J	--	7.17	--	< 7	--	7.27	--	10.7
LD-L3-SB-E-16-17 Re	Boring	9/21/2022	16 to 17	Dry	--	0.29 J	--	9.04	--	< 6	--	9.33	--	12.0
LD-L3-SB-E-17-18 Re	Boring	9/21/2022	17 to 18	Dry	--	0.28 J	--	11	--	< 7	--	11.28	--	14.5
LD-L3-SB-E-18-19 Re	Boring	9/21/2022	18 to 19	Dry	--	< 0.05	--	< 0.17	--	< 7	--	0.11	--	3.5
LD-L3-SB-E-19-20 Re	Boring	9/21/2022	19 to 20	Dry	--	1.09	--	9.24	--	< 7	--	10.33	--	12.7
LD-L3-SB-E-20-21 Re	Boring	9/21/2022	20 to 21	Dry	--	2.66	--	6.78	--	< 7	--	9.44	--	10.3
LD-L3-SB-E-21-22 Re	Boring	9/21/2022	21 to 22	Dry	--	0.92	--	10.3	--	< 7	--	11.22	--	13.8
LD-L3-SB-E-22-23 Re	Boring	9/21/2022	22 to 23	Dry	--	0.24 J	--	8.36	--	< 7	--	8.6	--	11.9
LD-L3-SB-E-23-24 Re	Boring	9/21/2022	23 to 24	Dry	--	8.59	--	6.33	--	< 6	--	14.92	--	14.9
LD-L3-SB-E-24-25 Re	Boring	9/21/2022	24 to 25	Dry	--	< 0.05	--	6.51	--	< 6	--	6.535	--	9.5
LD-L3-SB-E-25-26 Re	Boring	9/21/2022	25 to 26	Dry	--	0.1 J	--	4.21	--	25 J	--	4.31	--	7.7
LD-L3-SB-E-26-27 Re	Boring	9/21/2022	26 to 27	Dry	--	0.47 J	--	5.79	--	27 J				

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Sample ID	Sample Type	Collection Date	Depth Below Exposed Soil Surface (feet)	Soil Conditions	Ammonia-N (mg N/kg)		Nitrate-N (mg N/kg)		TKN-N (mg N/kg)		Sum of Ammonia and Nitrate (mg N/kg)		Sum of Ammonia, Nitrate and Organic Nitrogen (mg N/kg)	
					SoilTest	ALS	SoilTest	ALS	SoilTest	ALS	SoilTest	ALS	SoilTest	ALS
LD-L2-TP-S-120-132	Test Pit	5/27/2022	10 to 11	Dry	3.1	--	1.3	--	--	--	4.4	--	--	--
LD-L2-TP-S-132-144	Test Pit	5/27/2022	11 to 12	Dry	5.4	--	1.3	--	--	--	6.7	--	--	--
Lagoon No. 2 - West Sidewall														
LD-L2-TP-W-0-12	Test Pit	5/27/2022	0 to 1	Dry	6.5	--	82.9	--	--	--	89.4	--	--	--
LD-L2-TP-W-12-24	Test Pit	5/27/2022	1 to 2	Dry	9.3	--	128.6	--	--	--	137.9	--	--	--
LD-L2-TP-W-24-36	Test Pit	5/27/2022	2 to 3	Dry	16.1	--	52.6	--	--	--	68.7	--	--	--
LD-L2-TP-W-36-48	Test Pit	5/27/2022	3 to 4	Dry	6.9	--	49.6	--	--	--	56.5	--	--	--
LD-L2-TP-W-48-60	Test Pit	5/27/2022	4 to 5	Dry	5	--	36.7	--	--	--	41.7	--	--	--
LD-L2-TP-W-60-72	Test Pit	5/27/2022	5 to 6	Dry	7.8	--	111	--	--	--	118.8	--	--	--
LD-L2-TP-W-72-84	Test Pit	5/27/2022	6 to 7	Dry	8.6	--	64.5	--	--	--	73.1	--	--	--
LD-L2-TP-W-84-96	Test Pit	5/27/2022	7 to 8	Dry	4.5	--	129.8	--	--	--	134.3	--	--	--
LD-L2-TP-W-96-108	Test Pit	5/27/2022	8 to 9	Dry	4.2	--	63	--	--	--	67.2	--	--	--
LD-L2-TP-W-108-120	Test Pit	5/27/2022	9 to 10	Dry	3.9	--	52.9	--	--	--	56.8	--	--	--
LD-L2-TP-W-120-132	Test Pit	5/27/2022	10 to 11	Dry	4.7	--	52.5	--	--	--	57.2	--	--	--
LD-L2-TP-W-132-144	Test Pit	5/27/2022	11 to 12	Dry	6.1	--	96.1	--	--	--	102.2	--	--	--
LD-L2-SB-W-6-7	Soil Boring	8/24/2022	12 to 13	Dry	38.5	--	4.1	--	--	12 J	42.6	--	--	42.6
LD-L2-SB-W-7-8	Soil Boring	8/24/2022	13 to 14	Dry	23	--	1.2	--	--	41	24.2	--	--	42.2
LD-L2-SB-W-8-9	Soil Boring	8/24/2022	14 to 15	Dry	18.3	--	1.2	--	--	< 6	19.5	--	--	19.5
LD-L2-SB-W-9-10	Soil Boring	8/24/2022	15 to 16	Dry	36.5	--	1.6	--	--	39	38.1	--	--	40.6
LD-L2-SB-W-10-11	Soil Boring	8/24/2022	16 to 17	Dry	42.1	--	0.6	--	--	41	42.7	--	--	42.7
LD-L2-SB-W-11-12	Soil Boring	8/24/2022	17 to 18	Dry	6.1	--	1	--	--	< 6	7.1	--	--	7.1
LD-L2-SB-W-12-13	Soil Boring	8/24/2022	18 to 19	Dry	15.3	--	0.8	--	--	22 J	16.1	--	--	22.8
LD-L2-SB-W-13-14	Soil Boring	8/24/2022	19 to 20	Dry	30.4	--	0.6	--	--	33 J	31.0	--	--	33.6
LD-L2-SB-W-14-15	Soil Boring	8/24/2022	20 to 21	Dry	25.2	--	0.8	--	--	113	26.0	--	--	113.8
LD-L2-SB-W-15-16	Soil Boring	8/24/2022	21 to 22	Dry	21.2	--	1.8	--	53.8	47	23.0	--	55.6	48.8
LD-L2-SB-W-16-17	Soil Boring	8/24/2022	22 to 23	Dry	22.8	--	0.7	--	93.2	46	23.5	--	93.9	46.7
LD-L2-SB-W-17-18	Soil Boring	8/24/2022	23 to 24	Dry	30.3	--	2.2	--	< 50	41	32.5	--	32.5	43.2
LD-L2-SB-W-18-19	Soil Boring	8/24/2022	24 to 25	Dry	12.4	--	2.2	--	< 50	16 J	14.6	--	27.2	18.2
LD-L2-SB-W-19-20	Soil Boring	8/24/2022	25 to 26	Dry	7.5	--	1.1	--	< 50	14 J	8.6	--	26.1	15.1
LD-L2-SB-W-20-21	Soil Boring	8/24/2022	26 to 27	Dry	14.6	--	0.4	--	< 50	16 J	15.0	--	25.4	16.4
LD-L2-SB-W-21-22	Soil Boring	8/24/2022	27 to 28	Dry	15.4	--	0.5	--	< 50	25 J	15.9	--	25.5	25.5
LD-L2-SB-W-22-23	Soil Boring	8/24/2022	28 to 29	Dry	17.9	--	2	--	< 50	33 J	19.9	--	27.0	35.0
LD-L2-SB-W-23-24	Soil Boring	8/24/2022	29 to 30	Dry	15.6	--	8.5	--	< 50	23 J	24.1	--	33.5	31.5
LD-L2-SB-W-24-25	Soil Boring	8/24/2022	30 to 31	Saturated	26.5	--	14.1	--	49.8	39	40.6	--	63.9	53.1
LD-L2-SB-W-25-26	Soil Boring	8/24/2022	31 to 32	Saturated	6.7	--	14.8	--	< 50	16 J	21.5	--	39.8	30.8
LD-L2-SB-W-26-27	Soil Boring	8/24/2022	32 to 33	Saturated	15	--	12.3	--	< 50	25 J	27.3	--	37.3	37.3
Lagoon No. 2 - Northern Bottom Station														
LD-L2-TP-BN-0-12	Test Pit	7/22/2022	0 to 1	Dry	95.5	--	94.3	--	--	679	189.8	--	--	773
LD-L2-TP-BN-12-24	Test Pit	7/22/2022	1 to 2	Dry	348	--	3.4	--	--	521	351.3	--	--	524
LD-L2-TP-BN-24-36	Test Pit	7/22/2022	2 to 3	Dry	367	--	1	--	--	576	368.1	--	--	577
LD-L2-TP-BN-36-48	Test Pit	7/22/2022	3 to 4	Dry	804	--	ND (u)	--	--	782	803.6	--	--	804
LD-L2-TP-BN-48-60	Test Pit	7/22/2022	4 to 5	Dry	271	--	ND (u)	--	--	382	271.4	--	--	382
LD-L2-TP-BN-60-72	Test Pit	7/22/2022	5 to 6	Dry	32.5	--	ND (u)	--	--	99	32.5	--	--	99.0
LD-L2-TP-BN-72-84	Test Pit	7/22/2022	6 to 7	Dry	32	--	ND (u)	--	--	58	32.0	--	--	58.0
LD-L2-TP-BN-84-96	Test Pit	7/22/2022	7 to 8	Dry	174	--	2	--	--	212	176.1	--	--	214
LD-L2-TP-BN-96-108	Test Pit	7/22/2022	8 to 9	Dry	135	--	1.3	--	--	254	136.3	--	--	255
LD-L2-TP-BN-108-120	Test Pit	7/22/2022	9 to 10	Dry	187	--	2.6	--	--	255	189.6	--	--	258
LD-L2-TP-BN-120-132	Test Pit	7/22/2022	10 to 11	Dry	153.9	--	2.1	--	--	224	156.0	--	--	226
LD-L2-TP-BN-132-144	Test Pit	7/22/2022	11 to 12	Dry	213	--	1.2	--	--	296	214.2	--	--	297
LD-L2-SB-B-N-12-13	Soil Boring	8/24/2022	12 to 13	Dry	19.7	--	0.4	--	< 50	31 J	20.1	--	25.4	31.4
LD-L2-SB-B-N-13-14	Soil Boring	8/24/2022	13 to 14	Dry	31.6	--	0.6	--	--	56	32.2	--	--	56.6
LD-L2-SB-B-N-14-15	Soil Boring	8/24/2022	14 to 15	Dry	15.6	--	0.3	--	--	41	15.9	--	--	41.3

Table 1. Interim Summary of Soil Sampling Data - H&S Bosma Dairy Lagoons 1, 2 and 3

Revised Oct 28, 2022

Sample ID	Sample Type	Collection Date	Depth Below Exposed Soil Surface (feet)	Soil Conditions	Ammonia-N (mg N/kg)		Nitrate-N (mg N/kg)		TKN-N (mg N/kg)		Sum of Ammonia and Nitrate (mg N/kg)		Sum of Ammonia, Nitrate and Organic Nitrogen (mg N/kg)		
					SoilTest	ALS	SoilTest	ALS	SoilTest	ALS	SoilTest	ALS	SoilTest	ALS	
LD-L1-TP-E-108-120	Test Pit	7/22/2022	9 to 10	Dry	20.5	--	ND (u)	--	--	42	20.5	--	--	42	
LD-L1-TP-E-120-132	Test Pit	7/22/2022	10 to 11	Dry	32.4	--	1	--	--	89	33.4	--	--	90	
LD-L1-TP-E-132-144	Test Pit	7/22/2022	11 to 12	Dry	35.6	--	0.7	--	--	97	36.3	--	--	98	
Lagoon No. 1 - South Sidewall															
LD-L1-TP-S-0-12	Test Pit	7/22/2022	0 to 1	Dry	102	--	1.2	--	--	733	103.5	--	--	734	
LD-L1-TP-S-12-24	Test Pit	7/22/2022	1 to 2	Dry	130	--	0.6	--	--	550	130.1	--	--	551	
LD-L1-TP-S-24-36	Test Pit	7/22/2022	2 to 3	Dry	277	--	ND (u)	--	--	446	277.1	--	--	446	
LD-L1-TP-S-36-48	Test Pit	7/22/2022	3 to 4	Dry	206	--	ND (u)	--	--	312	205.9	--	--	312	
LD-L1-TP-S-48-60	Test Pit	7/22/2022	4 to 5	Dry	251	--	ND (u)	--	--	392	251.4	--	--	392	
LD-L1-TP-S-60-72	Test Pit	7/22/2022	5 to 6	Dry	222	--	0.8	--	--	373	223.1	--	--	374	
LD-L1-TP-S-72-84	Test Pit	7/22/2022	6 to 7	Dry	235	--	1	--	--	425	236.4	--	--	426	
LD-L1-TP-S-84-96	Test Pit	7/22/2022	7 to 8	Dry	211	--	1.4	--	--	460	212.5	--	--	461	
LD-L1-TP-S-96-108	Test Pit	7/22/2022	8 to 9	Dry	187	--	ND (u)	--	--	352	187.4	--	--	352	
LD-L1-TP-S-108-120	Test Pit	7/22/2022	9 to 10	Dry	248	--	0.7	--	--	348	248.8	--	--	349	
LD-L1-TP-S-120-132	Test Pit	7/22/2022	10 to 11	Dry	162	--	0.8	--	--	263	162.7	--	--	264	
LD-L1-TP-S-132-144	Test Pit	7/22/2022	11 to 12	Dry	197	--	2.5	--	--	326	199.7	--	--	329	
LD-L1-SB-S-6-7	Soil Boring	8/24/2022	12 to 13	Dry	92	--	0.6	--	--	488	92.9	--	--	489	
LD-L1-SB-S-7-8	Soil Boring	8/24/2022	13 to 14	Dry	166	--	0.5	--	--	466	166.6	--	--	467	
LD-L1-SB-S-8-9	Soil Boring	8/24/2022	14 to 15	Dry	105	--	0.5	--	--	299	105.3	--	--	300	
LD-L1-SB-S-9-10	Soil Boring	8/24/2022	15 to 16	Dry	160	--	0.5	--	--	196	160.0	--	--	197	
LD-L1-SB-S-10-11	Soil Boring	8/24/2022	16 to 17	Dry	73	--	0.7	--	--	484	73.7	--	--	485	
LD-L1-SB-S-11-12	Soil Boring	8/24/2022	17 to 18	Dry	29	--	0.7	--	--	64	29.8	--	--	64.7	
LD-L1-SB-S-12-13	Soil Boring	8/24/2022	18 to 19	Dry	26	--	0.5	--	--	53	26.6	--	--	53.5	
LD-L1-SB-S-13-14	Soil Boring	8/24/2022	19 to 20	Dry	27	--	0.9	--	--	40	27.6	--	--	40.9	
LD-L1-SB-S-14-15	Soil Boring	8/24/2022	20 to 21	Dry	21	--	0.6	--	--	35	J	21.3	--	35.6	
LD-L1-SB-S-15-16	Soil Boring	8/24/2022	21 to 22	Dry	42	--	0.7	--	102.47	62	42.6	--	103.2	62.7	
LD-L1-SB-S-16-17	Soil Boring	8/24/2022	22 to 23	Dry	20	--	0.9	--	58.25	18	J	20.8	--	59.2	20.8
LD-L1-SB-S-17-18	Soil Boring	8/24/2022	23 to 24	Dry	22	--	0.6	--	75.54	24	J	22.9	--	76.1	24.6
LD-L1-SB-S-18-19	Soil Boring	8/24/2022	24 to 25	Dry	16	--	0.6	--	74.73			16.1	--	75.3	
LD-L1-SB-S-19-20	Soil Boring	8/24/2022	25 to 26	Moist	41	--	0.6	--	105.02			41.3	--	105.6	
LD-L1-SB-S-20-21	Soil Boring	8/24/2022	26 to 27	Saturated	9	--	0.5	--	< 50			9.7	--	25.5	
LD-L1-SB-S-21-22	Soil Boring	8/24/2022	27 to 28	Saturated	14	--	0.6	--	< 50			14.4	--	25.6	
Lagoon No. 1 - West Sidewall															
LD-L1-TP-W-0-12	Test Pit	7/22/2022	0 to 1	Dry	ND (u)	--	49.2	--	--	451	49.2	--	--	500	
LD-L1-TP-W-12-24	Test Pit	7/22/2022	1 to 2	Dry	2.4	--	30.6	--	--	294	33.0	--	--	325	
LD-L1-TP-W-24-36	Test Pit	7/22/2022	2 to 3	Dry	3.5	--	9.8	--	--	248	13.3	--	--	258	
LD-L1-TP-W-36-48	Test Pit	7/22/2022	3 to 4	Dry	12.6	--	14.7	--	--	234	27.3	--	--	249	
LD-L1-TP-W-48-60	Test Pit	7/22/2022	4 to 5	Dry	1.6	--	16	--	--	208	17.6	--	--	224	
LD-L1-TP-W-60-72	Test Pit	7/22/2022	5 to 6	Dry	9	--	23.7	--	--	90	32.7	--	--	114	
LD-L1-TP-W-72-84	Test Pit	7/22/2022	6 to 7	Dry	1.4	--	114	--	--	122	115.8	--	--	236	
LD-L1-TP-W-84-96	Test Pit	7/22/2022	7 to 8	Dry	7.2	--	32.6	--	--	91	39.8	--	--	124	
LD-L1-TP-W-96-108	Test Pit	7/22/2022	8 to 9	Dry	12	--	27.5	--	--	56	39.5	--	--	84	
LD-L1-TP-W-108-120	Test Pit	7/22/2022	9 to 10	Dry	15.4	--	31.3	--	--	143	46.7	--	--	174	
LD-L1-TP-W-120-132	Test Pit	7/22/2022	10 to 11	Dry	41.9	--	16.1	--	--	165	58.0	--	--	181	
LD-L1-TP-W-132-144	Test Pit	7/22/2022	11 to 12	Dry	10.4	--	21.2	--	--	77	31.6	--	--	98	
LD-L1-SB-W-0-1	Boring	9/20/2022	6 to 7	Dry	--	1030	--	0.56	J	--	662	--	1031	--	1031
LD-L1-SB-W-1-2	Boring	9/20/2022	7 to 8	Dry	--	1190	--	1.93	J	--	825	--	1192	--	1192
LD-L1-SB-W-2-3	Boring	9/20/2022	8 to 9	Dry	--	1180	--	< 0.30	--	--	977	--	1180	--	1180
LD-L1-SB-W-3-4	Boring	9/20/2022	9 to 10	Dry	--	491	--	< 0.15	--	--	207	--	491	--	491
LD-L1-SB-W-4-5	Boring	9/20/2022	10 to 11	Dry	--	422	--	< 0.15	--	--	146	--	422	--	422
LD-L1-SB-W-5-6	Boring	9/20/2022	11 to 12	Dry	--	309	--	< 0.06	--	--	< 7	--	309	--	309
LD-L1-SB-W-6-7	Boring	9/20/2022	12 to 13	Dry	--	234	--	< 0.06	--	--	< 8	--	234	--	234
LD-L1-SB-W-7-8	Boring	9/20/2022	13 to 14	Dry	--	106	--	< 0.05	--	--	< 7	--	106	--	106
LD-L1-SB-W-8-9	Boring	9/20/2022	14 to 15	Dry											

Table 1. Interim Summary of Soil Sampling Data - H&S Bosma Dairy Lagoons 1, 2 and 3

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Sample ID	Sample Type	Collection Date	Depth Below Exposed Soil Surface (feet)	Soil Conditions	Ammonia-N (mg N/kg)		Nitrate-N (mg N/kg)		TKN-N (mg N/kg)		Sum of Ammonia and Nitrate (mg N/kg)		Sum of Ammonia, Nitrate and Organic Nitrogen (mg N/kg)	
					SoilTest	ALS	SoilTest	ALS	SoilTest	ALS	SoilTest	ALS	SoilTest	ALS
LD-L1-TP-BS-0-12	Test Pit	8/24/2022	0 to 1	Dry	71.5	--	0.5	--	--	377	72.0	--	--	378
LD-L1-TP-BS-12-24	Test Pit	8/24/2022	1 to 2	Dry	234.7	--	0.5	--	--	507	235	--	--	508
LD-L1-TP-BS-24-36	Test Pit	8/24/2022	2 to 3	Dry	606.2	--	0.4	--	--	666	607	--	--	666
LD-L1-TP-BS-36-48	Test Pit	8/24/2022	3 to 4	Dry	142.3	--	0.6	--	--	301	143	--	--	302
LD-L1-TP-BS-48-60	Test Pit	8/24/2022	4 to 5	Dry	71.6	--	0.6	--	--	172	72.2	--	--	173
LD-L1-TP-BS-60-72	Test Pit	8/24/2022	5 to 6	Dry	116.8	--	1.0	--	--	232	118	--	--	233
LD-L1-TP-BS-72-84	Test Pit	8/24/2022	6 to 7	Dry	40.8	--	0.5	--	--	74	41.3	--	--	74.5
LD-L1-TP-BS-84-96	Test Pit	8/24/2022	7 to 8	Dry	18.2	--	0.6	--	--	72	18.8	--	--	72.6
LD-L1-TP-BS-96-108	Test Pit	8/24/2022	8 to 9	Dry	27.3	--	0.5	--	--	91	27.8	--	--	91.5
LD-L1-TP-BS-108-120	Test Pit	8/24/2022	9 to 10	Dry	26.4	--	0.6	--	--	71	27.0	--	--	71.6
LD-L1-TP-BS-120-132	Test Pit	8/24/2022	10 to 11	Dry	13.9	--	0.7	--	--	127	14.6	--	--	128
LD-L1-TP-BS-132-144	Test Pit	8/24/2022	11 to 12	Dry	24.4	--	0.6	--	--	73	25.0	--	--	73.6
Lagoon No. 1 -Middle Bottom Sample														
LD-L1-TP-BM-0-12	Test Pit	8/24/2022	0 to 1	Dry	201.9	--	1.5	--	--	43	1.5	--	--	203
LD-L1-TP-BM-12-24	Test Pit	8/24/2022	1 to 2	Dry	337.5	--	5.1	--	--	488	342.6	--	--	493
LD-L1-TP-BM-24-36	Test Pit	8/24/2022	2 to 3	Dry	366.3	--	0.9	--	--	451	367.2	--	--	452
LD-L1-TP-BM-36-48	Test Pit	8/24/2022	3 to 4	Dry	170.5	--	1.1	--	--	325	171.6	--	--	326
LD-L1-TP-BM-48-60	Test Pit	8/24/2022	4 to 5	Dry	15.6	--	0.5	--	--	32	J 16.1	--	--	32.5
LD-L1-TP-BM-60-72	Test Pit	8/24/2022	5 to 6	Dry	13.3	--	0.8	--	--	35	J 14.1	--	--	35.8
LD-L1-TP-BM-72-84	Test Pit	8/24/2022	6 to 7	Dry	20.6	--	0	--	--	52	21.0	--	--	52.4
LD-L1-TP-BM-84-96	Test Pit	8/24/2022	7 to 8	Dry	21	--	0.6	--	--	41	21.6	--	--	41.6
LD-L1-TP-BM-96-108	Test Pit	8/24/2022	8 to 9	Dry	14.5	--	0.4	--	--	75	14.9	--	--	75.4
LD-L1-TP-BM-108-120	Test Pit	8/24/2022	9 to 10	Dry	30.1	--	0.5	--	--	85	30.6	--	--	85.5
LD-L1-TP-BM-120-132	Test Pit	8/24/2022	10 to 11	Dry	45.2	--	0.9	--	--	157	46.1	--	--	158
LD-L1-TP-BM-132-144	Test Pit	8/24/2022	11 to 12	Dry	65.1	--	1.2	--	--	143	66.3	--	--	144
Lagoon No. 1 -Eastern Sidewall #2 Sample														
LD-L1-TP-E2-0-12	Test Pit	8/24/2022	0 to 1	Dry	277.2	--	30.3	--	--	942	30.3	--	--	972
LD-L1-TP-E2-12-24	Test Pit	8/24/2022	1 to 2	Dry	163	--	1.5	--	--	401	164.5	--	--	403
LD-L1-TP-E2-24-36	Test Pit	8/24/2022	2 to 3	Dry	431.4	--	2	--	--	691	433.4	--	--	693
LD-L1-TP-E2-36-48	Test Pit	8/24/2022	3 to 4	Dry	442.1	--	0.6	--	--	600	442.7	--	--	601
LD-L1-TP-E2-48-60	Test Pit	8/24/2022	4 to 5	Dry	253.7	--	0.6	--	--	458	254.3	--	--	459
LD-L1-TP-E2-60-72	Test Pit	8/24/2022	5 to 6	Dry	241.7	--	1.3	--	--	409	243.0	--	--	410
LD-L1-TP-E2-72-84	Test Pit	8/24/2022	6 to 7	Dry	108.8	--	1	--	--	315	109.5	--	--	316
LD-L1-TP-E2-84-96	Test Pit	8/24/2022	7 to 8	Dry	64.4	--	1.4	--	--	198	65.8	--	--	199
LD-L1-TP-E2-96-108	Test Pit	8/24/2022	8 to 9	Dry	44.3	--	0.7	--	--	124	45.0	--	--	125
LD-L1-TP-E2-108-120	Test Pit	8/24/2022	9 to 10	Dry	24.6	--	1	--	--	148	25.6	--	--	149
LD-L1-TP-E2-120-132	Test Pit	8/24/2022	10 to 11	Dry	33.5	--	1.7	--	--	105	35.2	--	--	107
LD-L1-TP-E2-132-144	Test Pit	8/24/2022	11 to 12	Dry	53	--	1	--	--	80	54.0	--	--	81
LD-L1-SB-E-2-0-1	Boring	9/20/2022	6 to 7	Dry	--	444	--	98.1	--	623	--	542	--	721
LD-L1-SB-E-2-1-2	Boring	9/20/2022	7 to 8	Dry	--	795	--	7.67	--	876	--	803	--	884
LD-L1-SB-E-2-2-3	Boring	9/20/2022	8 to 9	Dry	--	792	--	< 0.15	--	882	--	792	--	882
LD-L1-SB-E-2-3-4	Boring	9/20/2022	9 to 10	Moist	--	735	--	< 0.15	--	870	--	735	--	870
LD-L1-SB-E-2-4-5	Boring	9/20/2022	10 to 11	Moist	--	615	--	4.5	--	818	--	620	--	823
LD-L1-SB-E-2-5-6	Boring	9/20/2022	11 to 12	Moist	--	795	--	< 0.15	--	957	--	795	--	957
LD-L1-SB-E-2-6-7	Boring	9/20/2022	12 to 13	Dry	--	105	--	< 0.05	--	196	--	105	--	196
LD-L1-SB-E-2-7-8	Boring	9/20/2022	13 to 14	Dry	--	24.8	--	< 0.05	--	< 6	--	24.8	--	25
LD-L1-SB-E-2-8-9	Boring	9/20/2022	14 to 15	Dry	--	4.45	--	< 0.05	--	< 6	--	4.48	--	4.5
LD-L1-SB-E-2-9-10	Boring	9/20/2022	15 to 16	Dry	--	5.31	--	< 0.05	--	< 6	--	5.34	--	5.3
LD-L1-SB-E-2-10-11	Boring	9/20/2022	16 to 17	Dry	--	1.26	--	< 0.05	--	< 7	--	1.29	--	3.5
LD-L1-SB-E-2-11-12	Boring	9/20/2022	17 to 18	Dry	--	0.41	J	< 0.05	--	< 6	--	0.44	--	3.0
LD-L1-SB-E-2-12-13	Boring	9/20/2022	18 to 19	Dry	--	0.44	J	< 0.05	--	< 6	--	0.47	--	3.0
LD-L1-SB-E-2-13-14	Boring	9/20/2022	19 to 20	Dry	--	0.47	J	< 0.05	--	< 7	--	0.50	--	3.5
LD-L1-SB-E-2-14-15	Boring	9/20/2022	20 to 21	Moist	--	0.38	J	< 0.05	--	< 7	--	0.41	--	3.5
LD-L1-SB-E-2-15-16	Boring	9/20/2022	21 to 22	Dry	--	0.								

Table 1. Interim Summary of Soil Sampling Data - H&S Bosma Dairy Lagoons 1, 2 and 3

Revised Oct 28, 2022

Sample ID	Sample Type	Collection Date	Depth Below Exposed Soil Surface (feet)	Soil Conditions	Ammonia-N (mg N/kg)		Nitrate-N (mg N/kg)		TKN-N (mg N/kg)		Sum of Ammonia and Nitrate (mg N/kg)		Sum of Ammonia, Nitrate and Organic Nitrogen (mg N/kg)	
					SoilTest	ALS	SoilTest	ALS	SoilTest	ALS	SoilTest	ALS	SoilTest	ALS
LD-L1-SB-W-2-9-10	Boring	9/20/2022	15 to 16	Dry	--	1.38	--	0.137 J	--	97	--	1.52	--	97.1
LD-L1-SB-W-2-10-11	Boring	9/20/2022	16 to 17	Dry	--	0.5 J	--	< 0.05	--	102	--	0.53	--	102
LD-L1-SB-W-2-11-12	Boring	9/20/2022	17 to 18	Dry	--	0.36 J	--	< 0.05	--	64	--	0.39	--	64.0
LD-L1-SB-W-2-12-13	Boring	9/20/2022	18 to 19	Dry	--	0.33 J	--	< 0.05	--	105	--	0.36	--	105
LD-L1-SB-W-2-13-14	Boring	9/20/2022	19 to 20	Dry	--	0.33 J	--	< 0.06	--	92	--	0.36	--	92.0
LD-L1-SB-W-2-14-15	Boring	9/20/2022	20 to 21	Dry	--	0.18 J	--	< 0.05	--	41	--	0.21	--	41.0
LD-L1-SB-W-2-15-16	Boring	9/20/2022	21 to 22	Dry	--	0.83	--	< 0.05	--	25 J	--	0.86	--	25.0
LD-L1-SB-W-2-16-17	Boring	9/20/2022	22 to 23	Dry	--	0.17 J	--	< 0.05	--	56	--	0.20	--	56.0
LD-L1-SB-W-2-17-18	Boring	9/20/2022	23 to 24	Dry	--	0.15 J	--	< 0.05	--	56	--	0.18	--	56.0
LD-L1-SB-W-2-18-19	Boring	9/20/2022	24 to 25	Dry	--	0.33 J	--	0.359	--	18 J	--	0.69	--	18.4
LD-L1-SB-W-2-19-20	Boring	9/20/2022	25 to 26	Moist	--	0.98	--	2.38	--	< 7	--	3.36	--	5.9
LD-L1-SB-W-2-20-21	Boring	9/20/2022	26 to 27	Saturated	--	0.38 J	--	8.17	--	< 6	--	8.55	--	11.2
Field Blanks (Laboratory-Grade Sand)														
LD-L2-SB-B-N-27-28	Field Blank	8/24/2022	--	Dry	1.1	--	0.4	--	50.0 U	--	0.4	--	25.4	--
LD-L1-SB-S-22-23	Field Blank	8/24/2022	--	Dry	3.7	--	0.5	--	50.0 U	--	4.2	--	25.5	--
LD-L1-SB-S-23-24	Field Blank	8/24/2022	--	Dry	3.0	--	0.5	--	50.0 U	--	3.5	--	25.5	--
LD-L2-SB-W-27-28	Field Blank	8/24/2022	--	Dry	10.4	--	0.8	--	50.0 U	--	11.2	--	25.8	--
LD-L1-SB-B-M-21-22	Field Blank	10/6/2022	--	Dry	--	0.04 J	--	< 0.05	--	< 6	--	0.065	--	3.03
LD-L1-SB-B-N-21-22	Field Blank	10/6/2022	--	Dry	--	0.06 J	--	< 0.05	--	< 6	--	0.085	--	3.03
LD-L1-SB-W-21-22	Field Blank	10/6/2022	--	Dry	--	0.05 J	--	< 0.05	--	< 6	--	0.075	--	3.03
LD-L1-SB-W-2-21-22	Field Blank	10/6/2022	--	Dry	--	0.05 J	--	< 0.05	--	< 6	--	0.075	--	3.03

Notes:

Data are preliminary and have not yet been validated. Results are subject to change.

LEGEND

 45 to 199 mg N/kg
 200-399 mg N/kg
 > 400 mg N/kg
 Data not yet available from laboratory

Figure 1 - Summary of Lagoon 3 Soil Testing Data

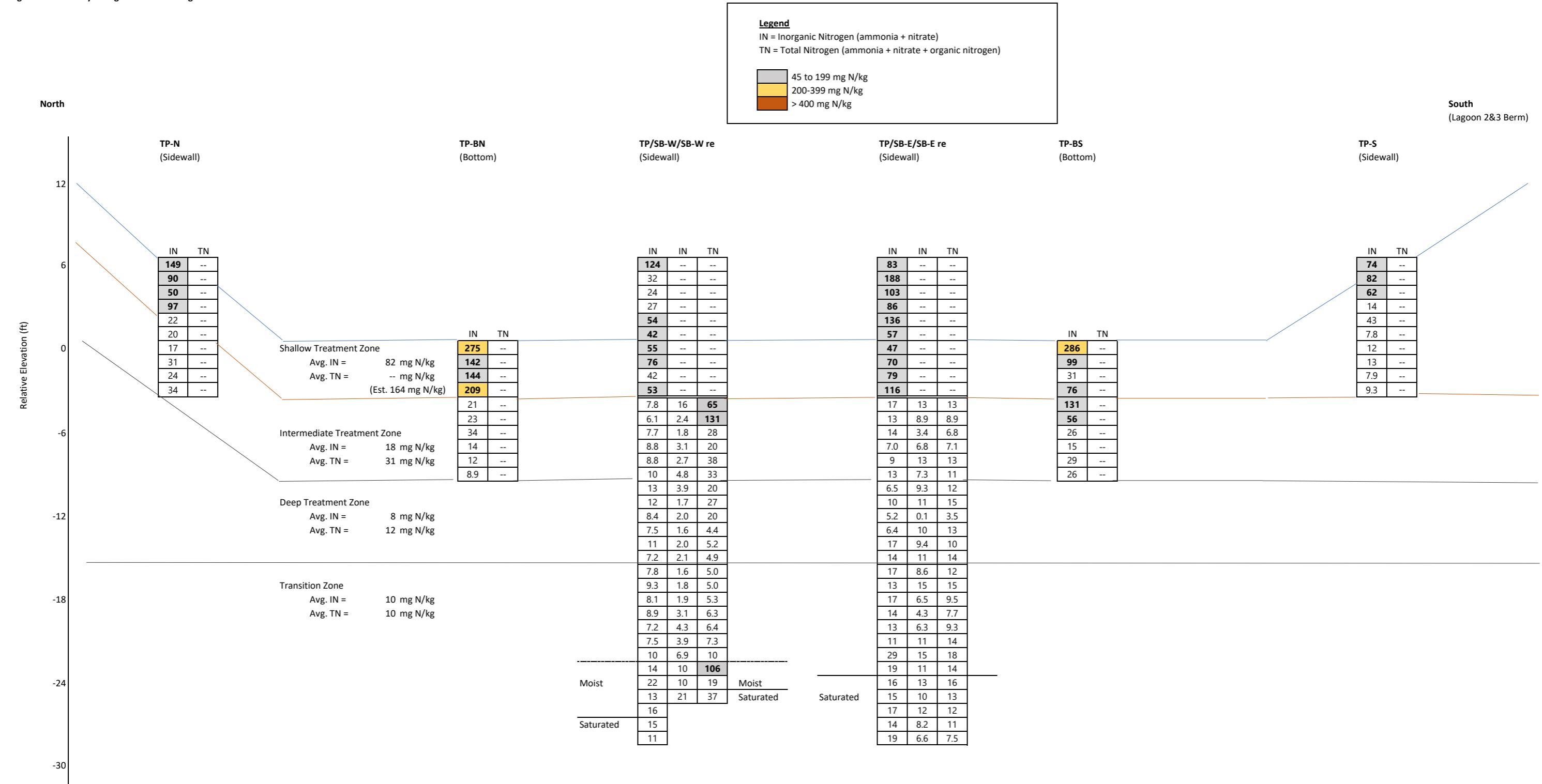


Figure 2 - Summary of Lagoon 2 Soil Testing Data

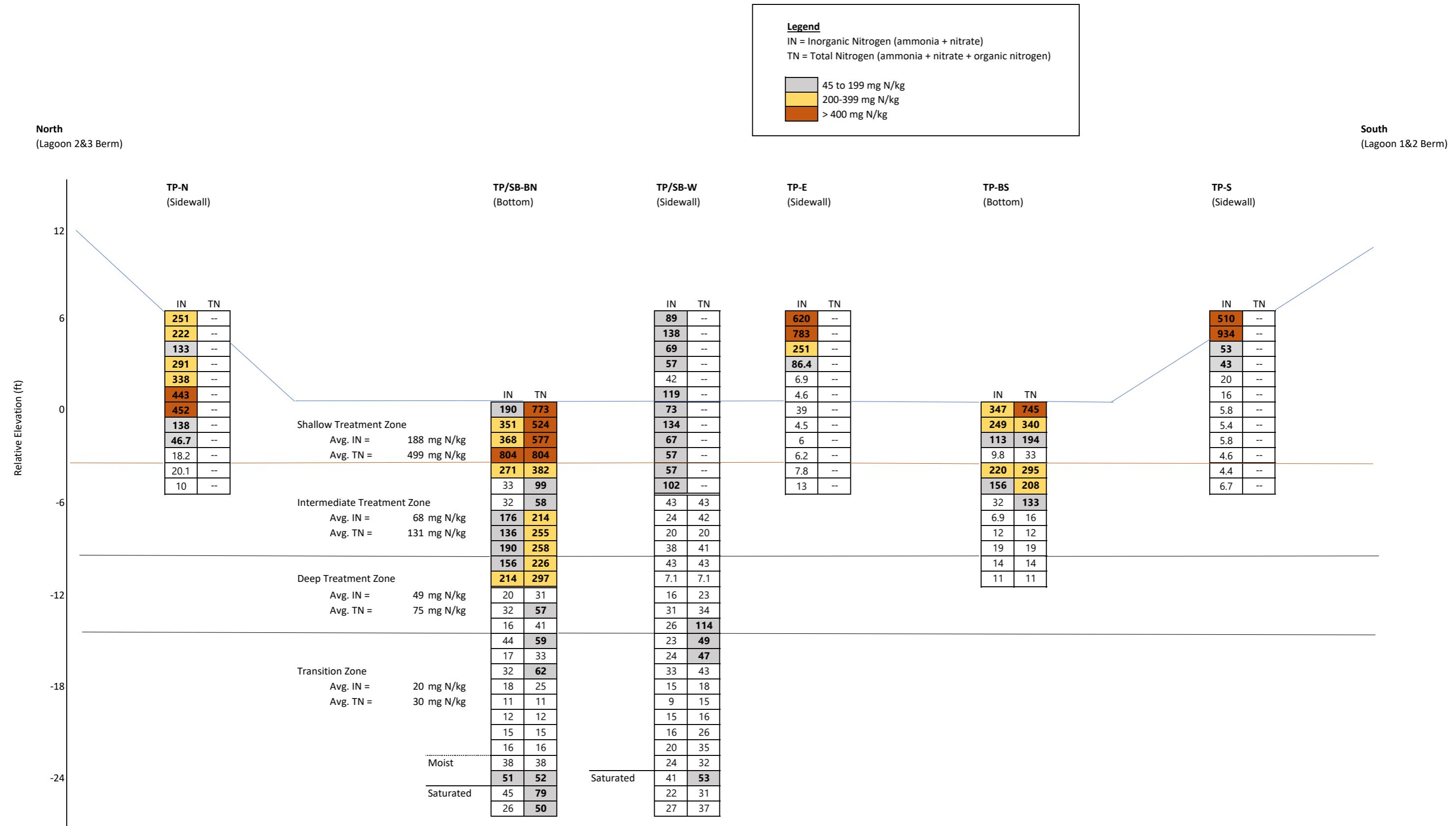


Figure 3 - Summary of Lagoon 1 Soil Testing Data

North
(Lagoon 1&2 Berm)

South
(Berm and Slope to
Sunnyside Canal)

